



PREPARATION AND EVALUATION OF FACE SCRUB USING EXFOLIATING AGENT GREEN TEA LEAVES

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ABSTRACT :

Facial scrubber removes dead skin particles, cleanses, hydrates and exfoliates the skin. Absorbent clays like bentonite & kaolin present in formulation produce a cleansing effect. Glycerin acts as humectant & emollient to such formulation. Cetyl alcohol is a good stabilizer of the scrub and act as emollient and improves stability. Sodium lauryl sulphate is mainly used as soap former because when face scrub is removed by gently washing provides soap formation. Cucumber extract is used for a soothing effect. Exfoliation helps remove dead skin cells that can cause the skin to look dull and triggers the production of new skin cells for a glowing appearance. Biomolecules present in green tea leaves minimize oil production in skin cells. And poly phenols like catechins help reduce irritation, redness, swelling and itching. It also prevents wrinkles and provides intense nourishment and hydration. Vit.E present in green tea fades the dark spots, pimples and also moisturizes the skin.

KEYWORDS: Face scrub, exfoliating agent.

INTRODUCTION :

[1] The face scrub is a water insoluble powder particle that removes dead skin when rubbed with palm on face. Face scrub is used by applying the product on the skin and massaging it onto the skin and removed with the help of water. [2] A scrubbing agent is also named as exfoliant. This exfoliating agent used in skin care cosmetic product. To remove the dead skin cells, black heads, and dullness, cleanse the skin and smooth the skin texture, unclog pores, increase skin brightness and decrease hyper pigmentation. [3] When the scrub is applied on skin, the scrubbing particles rub and dead skin cells against the skin and removes all the dirt from the skin pores and makes skin smoother and softer. The P^H of a scrub ranges from 5.5-7. Examples of scrubbing agents are alpha hydroxy acids, Beta hydroxy acids, Sugar, Salts, wall nut shell powder, coffee grounds etc.

EXFOLIATION (mechanical)

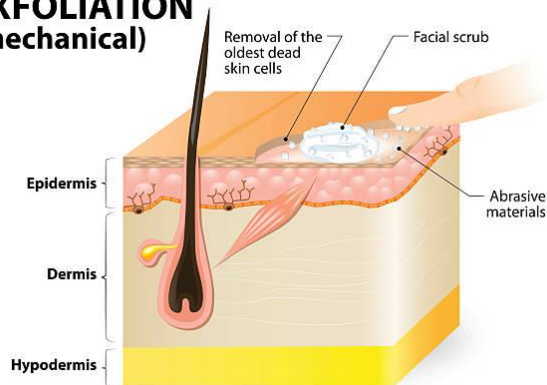


Fig.no.1: Exfoliation

Exfoliation

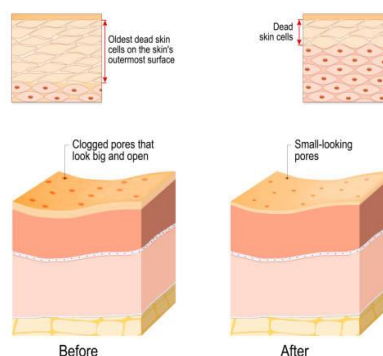


Fig.no.2: Before and after application of face scrub

[4] Kaolin contains 46.54% SiO_2 , 39.50% Al_2O_3 and 13.96% water. High amount of silica used for collagen production and for elastic nature of skin. Kaolin removes the dead skin cell and gives soft skin texture. Kaolin also treats acne skin problems. By removes the black heads. Daily application of kaolin on skin promotes brightening, glowing skin, by increasing blood circulation. [5] Bentonite is naturally occurring clay made from sedimentary

rocks and volcanic ash. Bentonite clay also known as montmorillonite clay contains huge amount of minerals like Ca, Mg, and Fe etc. It is used as an absorbent, thickener, and binder in various skin care cosmetic products. The colloidal clay appears as a grey or cream color fine powder. Primary use of bentonite clay in skincare formulation is deep penetration and absorption of excess oil and dirt from the surface of skin and reduces redness and inflammation i.e. caused by acne and also makes skin softer. [6] Cetyl alcohol is a natural ingredient extracted from coconut, palm oil. It is a waxy white ingredient. It is used as thickening agent in cosmetics sometimes it is also used as moisturizer to prevent dry, rough, itching skin. Cetyl alcohol act as a emollient helps to prevent dry skin and gives moisturising effect. By forming a protective layer on the skin and preventing water loss. Cetyl alcohol also acts as surfactants removes dead skin cells, Promotes skin cell growth. [7] Cucumber provides a refreshing sensation by hydrating the skin. Its astringent effect can help to tighten and firm the skin. It acts as an anti inflammatory and astringent. Its antioxidant property reduces the premature aging. In skin care products is used to reduce puffiness around the eyes and skin irritation and also provides refreshing feeling. [8] Extracts of green tea leaves are used in the preparation of serum and anti-aging creams, face mask. The extract contains anti-oxidants, catechin, vitamins, amino acids, poly phenols protect the skin from oxidative stress, reduce the fine lines and wrinkles on face. The leaves also used as a natural exfoliants to remove the dead skin cells and improve circulation, promote a radiant complexion and give soothing effect. It has anti-inflammatory and anti-microbial properties make effective in cleansers and toners for acne prone skin. It also improves skin hydration and elasticity. SLS is an anionic surface active agent used as a detergent, wetting agent, emulsifier in cosmetic and pharmaceuticals. It removes dirt and oil by its lathering effect.

MATERIALS AND METHODS :

Cucumber and Green tea leaves were purchased from local market at vizianagaram, kaolin, bentonite, sodium lauryl sulfate, methyl paraben were purchased from yarrow chem products, Mumbai by St. Ann's college of pharmacy.

FORMULATION OF FACE SCRUB USING EXFOLIATING AGENT GREEN TEA LEAVES

Table.no.1 Formulation of Face Scrub

S.NO	INGREDIENTS	QUANTITY (gm)	PURPOSE
1	Cucumber	12.09	Soothing agent
2	Kaolin	19.91	Cleansing agent
3	Bentonite	4.26	Cleansing agent
4	Sodium lauryl sulfate	0.07	Surface active agent
5	Methyl paraben	0.14	Preservative
6	Water	quantity sufficient	vehicle
7	Green tea leaves	2.13	Exfoliating agent

PREPARATION OF FACE SCRUB

[9],[10],[11] Firstly, take fresh cucumbers wash it with fresh water and grated. Sun dry the grated cucumber and stored in an air tight container. Add glycerine into dried cucumber soak for whole night for getting an extract. Take a neat and cleaned beaker mix all solid ingredients one by one. Melted cetyl alcohol was added to above mixture. Add required quantity of water to it by applying heat. Finally add exfoliating agent green tea leaves mix it well. The product was stored in a well closed container.

EVALUATION TESTS :

Physical characteristics

Observe texture, color, odor by visual inspection.

P^H Test

[12],[13] Take 1gm of product (facial scrub) and now dissolved that product in 10ml of water and check P^H using ph paper or pH meter.

Wash ability test

Apply a small amount of sample to a designated area of the skin. Massage the scrub into skin for about 30sec. Rinse the area thoroughly with water.

Foam test

[14],[15] 4gm of sample mixed with 20ml of distilled water in a graduated measuring cylinder. Mix thoroughly until it produces foam. Measure the foam height using measuring scale.

Skin irritation test

Apply sample on dorsal skin of the hand. Leave it for 10min observe any irritation on applied area.


Grittiness test

[16],[17] Rub the sample between 2 fingers and observe any gritty particles.

Spread ability test

Take some required quantity of sample spread on skin surface with rubbing.

RESULTS AND DISCUSSION :**Table.no.2: Results of Face scrub**

TEST	OBSERVATION
Product	
Texture	Moderate
Color	Tan color
Odour	Characteristic odour
p ^H	6.75
Foam test	Foam height-10ml (Measuring cylinder) 3.5cm (Measuring scale)
Wash ability test	Easily washable
Skin irritation test	No irritation
Grittiness	Gritty particles are present (Green tea leaves)
Spread ability	Easily spreadable

DISCUSSION :

Detoxifying property of kaolin helps acne problems and making skin healthy wrinkle free, younger and healthier look. Clay of bentonite tightening skin and removes the excess oil and impurities from the skin. Folic acid present in the cucumber protects the skin from environmental toxins. It also contains mineral called silica which makes connective tissue stronger and provides an instant glow, reduces the redness and inflammation. Cucumber helps to draw out dirt, oil and other toxic impurities from the pores of clogged skin gives skin smoother, charm looking skin. Pores are the little opening in the skin that release unwanted oil and sweat. Clogged pore can result in black heads, white heads and acne. The poly phenols in green tea can fight against infection by damaging bacterial membranes. Which can help to control acne problem. Direction of use of face scrub is to take a small quantity on the palm and gently massage on to face and neck. Leave it for 2-5 min and rinse with water thoroughly.

CONCLUSION :

Kaolin, Bentonite, Cucumber, Green tea leaves all are natural products. By using this naturally occurred product a facial scrub was prepared. A good texture product was obtained. A sample was tested for P^H gives 6.75, its physical characters also examined. Wash ability, spread ability, foaming test, grittiness, skin irritation test was analyzed and the test results were obtained with optimum levels.

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